

ORAL HYGIENE

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AUGUST, 1922

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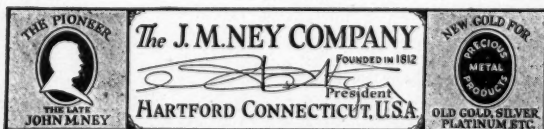
Metallurgy is a distinct and important branch of modern science; but *dental* metallurgy is a science in itself.

General metallurgy casts interesting side lights on the problems arising in dentistry—but they are only side lights.

In the development of a group of gold alloys, such as is embraced in the Ney-Oro Series, empiricism was out of the question, and general metallurgists could afford little help.

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It is only such specialized scientific skill that enables us to produce the fine materials required in the fine art of modern dentistry.



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AUGUST, 1922

VOL. XII, No. 8

Focal Infection



THE majority of infections of the body are due to centers of infection in some part of the head. These centers are mostly the cells and sinuses connected with the ear, nose, throat, tonsils and teeth.

There are thirty-two chances for infection from the permanent teeth and twenty from the temporary teeth. If the teeth and mouth are neglected, you are almost certain to have foci, or centers of infection, in the mouth.

Any disease that is caused by pus may develop from the teeth.

It is true that you cannot prevent all mouth infection no matter how hard you try, but you can prevent most of it. Isn't it foolish to suffer and waste health and energy from abscesses that you could have prevented?

You might be naturalized in another country and you might get another wife or husband, but you can't get another body. Take care of the one you have.

No. 8. Of a series of health talks, the text of which is approved by the National Dental Association.

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DENTAL WELFARE FOUNDATION
Pittsburgh, U.S.A.

This is card number eight of the Dental Welfare series—being mailed this month to 450,662 families. So much has been said and written about focal infection that this card was written in an effort to provide direct and simple information as to the meaning and significance of the term.

Dental Orthopedics

By MOSES JOEL EISENBERG, D.M.D., Roxbury, Mass.

Assistant in Dental Orthopedics at the Forsyth Infirmary. Former assistant in Neurology. Fellow of the Harriet Newell Lowell Society for Dental Research of Harvard University.



A GREAT deal has been said in recent years concerning teeth and their relationship to the body in general. The results of the neglect of caries and putrescent conditions found in teeth have been emphatically decried, but a phase of dentistry, the importance of which cannot be overestimated, has been disregarded for a long time without even being recognized, to the detriment of humanity.

Very few members of the dental and medical professions have given much thought to the matter, and those who have, have found it difficult to make other people concur in their beliefs. It is no more and no less a condition, than a slow strangling of children by means of the temporary teeth, and to quote a well known economist who was interested in this work, "There are more children being strangled to death by failure to give the baby-teeth a chance, and more men crippled and deformed by the same thing, than the total casualties that child slavery and war can show."

How many dental and medical men reply to parents when

shown deformed temporary teeth, "Oh! He'll grow out of it." No, he won't grow out of it; he will continue to grow from bad to worse, and unless Nature's warning is heeded, an irreparable damage will be done to the development of the child.

Let us remember this always. Most children are born well, it is after birth that care or neglect sows the seeds that will germinate in their future weal or woe.

Look at the mouth breathers, the adenoid children, the deformed faces of those whose teeth project from the upper jaw like a canopy, thereby preventing normal breathing and proper mastication, with its resultant decrease in bodily efficiency and health! Ponder over these conditions and remember that they can be prevented only if recognized in time and the proper means applied to help nature reconstruct its deformity. Remember also, that it is not alone the dentist who is at fault but his comrade, the physician who makes light of dental matters and sometimes scorns to learn more concerning such trifling things as teeth.

Whether they be temporary or the permanent teeth they

are important enough to be members of our human body, and therefore are entitled to their share of attention and care. It should not be forgotten that the teeth among other things are wonderful indexes to the nutritional history of the individual; they are infallible guides wherever their testimony is received for consideration.

Consider again the deformed mouths of children at the ages of ten and twelve and remember that these deformities could have been improved or better, prevented, by proper treatment of the temporary teeth before the age of six. Doesn't this merit a few moments of careful thought and deliberation?

Nature sounds a warning long before the child's teeth have any pronounced abnormality. She feels as if it were man's duty to aid in the work of reconstruction in children who have suffered by our advance in civilization. Many a limp child, with a paroxysmal cough, earaches, snuffles, and its mouth hanging open, is the result of our disregard or failure to recognize the warning symptoms issued to the poor little victim early in its career.

Anticipation of Mal-occlusions, or Dental Orthopedics as it is now called, had its origin in the work of the late Dr. E. A. Bogue of New York. Dental Orthopedics is a step forward in dentistry such as could hardly have been dreamed of were it not for the sound foundation of its science.

Mal-occlusion is a well recognized defect in the adult teeth of the human race. But its recognition in the temporary teeth is not yet fully appreciated by the rank and file of the profession. In the development of this phase of preventive medicine, we are concerned with the dental signs of development of the teeth; the investing jaws are the landmarks for study and consideration. The study of anthropology has established certain definite measurements for the head and bones of the body. This same spirit of scientific investigation has carried one of our most brilliant men to the recognition and the establishment of some of the most startling of facts that preventive dentistry has ever had placed before it for its consideration.

The majority of the dental profession are overlooking the greatest opportunity that Nature ever offered. The period in which this opportunity lies is between the third and seventh year of the child's existence. At three years of age, all of the child's temporary teeth should be in position. It has been assumed that the temporary teeth are usually regular. But I shall show that the temporary teeth are frequently and more commonly than supposed, very irregular and that they fairly indicate the irregularities that are impending upon the permanent teeth. I expect to show that any debilitating causes such as adenoids or enlarged tonsils,

or vitamine deficient diet, work noticeably on the teeth and from evidences which they afford, the scientists either medical or dental may early detect an incipient mal-occlusion and also its running mate a lowered vitality. In other words, if the vitality of the child is habitually below its proper level, the dentist may detect it before any other servant of the bodily welfare could, and long before real illness has made itself felt.

If I may be permitted to quote, I will give you some original thoughts on this theme as they were given to me by the father of this work, the late Dr. Edward A. Bogue:

"Growing teeth are guided into proper positions by the outward push of the tongue and the inward pull of the lip and cheek muscles. All healthy and well formed babies sleep with the mouth closed and the tongue pressed against the roof of the mouth drawing downward by suction. This moulds the arch of the palate, and as the tongue grows and moves about, it enlarges the arches of the teeth by pressing against them, and with the assistance of the cheeks and lips on the outside of these arches, moulds them to proper shape.

"When the mouth is open as in mouth breathing, the tongue is no longer sucked up against the hard palate, and it no longer pushes the teeth outward as it was intended to do. The jaws fall apart to a distance that increases the pull

of the muscles of cheek and lips. The air pressure on the bone which forms both the roof of the mouth and the floor of the nose, is no longer favorable to its flattening and broadening. In other words, the forces that push the teeth from within outward, have been weakened, and the forces that pull the teeth inward toward the medial line, have been increased, resulting in irregularities among teeth, palate and nose. Now the bony system is largely developed through the activity of those muscles that are attached to the bones."

The bones of the face and jaw are no exception. The brain of the average child weighs at birth 371 grammes; at six years of age it weighs 1360 grammes. A gain of only 40 grammes is made from the sixth to the nineteenth year of life. All deformities therefore whether of hip-joint, club-foot, chin, jaws, teeth, nose or face should be corrected before the sixth year of life. Much may be done in a comparatively short time, with little or no pain and with greater promise of success, because all is accomplished during the years of most rapid growth, when Nature is an aid and not a hindrance.

Professor Lorenz who is now in America paying Austria's debt to American children, refuses to replace a dislocated hip-joint after five years of age, finding the surrounding parts too rigid and unyielding to insure success.

For precisely the same reason, operations to correct small nasal passages, a crooked nasal partition, irregular teeth, a high arched roof of the mouth, a retreating chin, or a chin that projects like that of a bull-dog, should all be undertaken and completed if possible before the sixth year of life. Irregular teeth can often be brought into line at this early age and they may also be made to spread the arches and roof of the mouth. By spreading the temporary teeth in this manner early enough, the crowns of those permanent teeth which are held by the roots of the temporary teeth are drawn into positions that they ought to take. In this way very many irregularities may be prevented which would otherwise be inevitable.

Previous to 1900, little if anything was known as to the influence of the temporary teeth upon the permanent ones, and the most recently published works do not enlighten us much on this very important subject.

Every mother should ask her family physician to recommend to her a dentist who is competent to treat temporary teeth. He should carefully examine each child as it reaches the third year and should determine if the teeth are healthy and the arches correct. If they are not, he should make it his duty to see that they are made so. There are dentists who are qualified to do this and thereby prevent

serious deformity in the later life of the individual.

There are others who go so far in the wrong direction as to neglect the temporary teeth. Thanks to the Forsyth Infirmary and the general education of the public now being accomplished through the means at hand of the Massachusetts Dept. of Public Health, the number is steadily growing smaller and smaller. They seemingly do not realize that, upon the good condition of the temporary teeth, largely depend the position of the permanent teeth, the condition of their surrounding parts, and through them the health and beauty of the teeth, of the face, the efficiency of the breathing apparatus, and so practically of the entire body.

Some men have counseled delay and advised waiting for complete growth of the permanent teeth before attempting correction. This ensures the loss of facility of manipulation afforded by the transitional state of development, and makes the operator encounter the additional obstacles afforded by confirmed irregularities and deformities, which complete development endeavors to make fixed and permanent. Needless to say, fixation takes place regardless of good or evil, or right or wrong as far as the condition of the teeth is concerned.

There are two conditions that most call for the attention of the dental orthopedist at this early age, (four to six years.) Projection of the upper

or lower teeth and the failure of the temporary teeth to spread apart laterally, especially the six anterior teeth.

Dr. Bogue voiced his belief that the failure of the temporary teeth to separate at about the age of four, was evidence of a deficiency in vitality, even though the child should appear well in every other way. He stated that in every case which he had made a careful investigation there was found some perversion of function, which had been working harm to the physical welfare of the child.

The unearthing of this perverted function is more important than might at first appear. No real success can be attained in the work unless it is definitely located and either removed or counteracted, as it will continue to act and thwart the efforts at regulation of either the temporary or the permanent teeth.

We usually do not have to search far for this perverted function. We will often find it located in the nose or the nasopharynx and probably in the form of some interruption in the normal nasal respiration, frequently under the familiar names of adenoids or tonsils.

If Nature did not exhibit vigor sufficient to move the temporary teeth apart, thereby enlarging the dental arch to the anterior segment of the adult arch, she surely cannot be expected to demonstrate vigor enough to move the permanent teeth which have been propelled into mal-posi-

tions through the failure of arch enlargement. I have briefly explained, previously, the mechanics of the arch formation and its application can now be seen.

In the study of the relationship to the temporary and permanent arches, Dr. Bogue has come to the conclusion that unless the arches of deciduous teeth after they have been fully erupted are more than 28m.m. broad between the palatal grooves of the second temporary molars, that bony matter will not be deposited between these deciduous teeth and consequently the arches will not grow any larger. Hence, some outside influence must be brought to bear or we shall have such results as deafness, mouth-breathing, inability to enunciate correctly, and a general lack of bodily vigor and resistance. The question raised regarding the relation to tooth size and arch measurement, is taken care of as well as the question regarding the basis of the 28m.m. measurement, the minimum breadth of any arch that may possibly develop later into normality, by the following explanation:

The size of teeth or the size of the individual has no bearing in the size of the arch width as it concerns the temporary teeth. The basis of the 28m.m. is as follows: The normal arch of temporary teeth is somewhere from 32 to 35m.m. and a possible normality at 28m.m. is mostly in the bony tissue between the teeth. This

bony tissue has been and is being deposited all around in that neighborhood. This includes the bones of the face, which involve the antra; the bones of the nose which involve the nasal passages and the bones of the skull which involve the brain case. The growth of all these is more or less dependent upon the exercise of the muscles which are inserted into the mandible, the maxilla and the temporal regions. The exercise of these muscles is in turn dependent on the general physical condition of the child. If the vigor of childhood is not sufficient to cause union of enamel plates, let no one imagine that anything less than a mechanical completion by man of Nature's work is going to save those teeth from ultimate destruction through decay. The earlier that the unfinished job of Nature is completed, the better for the patient.

The mechanical apparatus used for completion of this unfinished job of Nature's, consists of molar anchor bands made on the second temporary molars. There is, attached to these anchor bands, palatally, an extension wire touching the palatal surface of the first temporary molar and the temporary cuspid where it terminated, mesial of the palatal tubercle of the temporary cuspid. Buccally there is a vertical tube attached to the band by means of a spur to prevent impinging of the gum by the arch wire. The arch wire is usually made to contain two

S loops so that growth and expansion may be accomplished without the necessity of making a new arch. No ligation of individual teeth is practised, as no object is attained; we desire to use the temporary teeth as the tools and means of spreading the arches to sufficient size for the reception and accommodation of the permanent teeth.

A similar apparatus is made for the lower arches, the difference being in the lingual wire which is to act as a finger-spring pushing a segment of the arch in harmony with the arch wire. This finger-spring reaches from the lingual surface of the lower molar anchor bands to the lateral on the opposite side, care being maintained that it touches each and every tooth on its way around.

The speed with which this work can be accomplished is remarkable, but it is not desired to tear the teeth from the arches and move them; no, it is desired to so apply the arch force that the movement is slow and positive. It is desirable that when the arch width is attained, the forces and stresses of mastication will act as the retaining appliances rather than some cumbersome apparatus that is working against our principle of prevention of malocclusions. In the permanent teeth, there must be a regulation of the temporary arches with the temporary teeth as the tools by which our results are obtained.

Fractures of the Mandible Without the Patient's Knowledge

By JOHN J. OGDEN, D.D.S., Memphis, Tenn.



FEW weeks ago, a patient was referred to me for the removal of a lower first bicuspid.

There was a great deal of swelling and pus present. The tooth had an M. O. D. amalgam filling.

It is a routine practice to go over every case before extracting and compare my diagnosis with that of the referring dentist. After making an examination I noticed a slight crepitus of the ends of what appeared to be a fractured mandible. A radiograph clearly showed a complete fracture of the mandible in the region of the bicuspid. His dentist was very much surprised to learn this but he asked me to go on with the treatment of the jaw.

Had I extracted the tooth without making a thorough examination, and later when the socket did not heal and likely necrosis had developed, law suit might have resulted. It would have been hard for me to convince the patient that I did not fracture his jaw.

A cast silver splint was constructed for the fixation of the fragments. The first bicuspid was extracted for drainage and

because it was in line of fracture and the splint was cemented to the teeth. The splint was in place for four weeks, after which there was good union.

I questioned the patient as to whether he had received a blow on his jaw. He then told me the story: "About ten days ago I was standing on the back platform of a crowded street car and I accidentally stepped on a man's toe. I asked him to 'excuse me, please,' that I was 'sorry that I had stepped on his foot.' I rode to my destination and stepped off the car and I noticed that this man got off with me and just as I started to walk away he struck me with his fist and stepped back on the car as it was leaving. It never entered my mind that my jaw was fractured. The next day my jaw was somewhat swollen but I did not suffer any uneasiness but just that the blow had caused the swelling. I waited about a week thinking that the swelling would go down. I then consulted a dentist thinking that the blow had caused one of my teeth to abscess."

Another case was referred

to me which I diagnosed as a fracture of the mandible on the right side in the bicuspid region. I questioned the man as to a blow and he told me that he had been struck with a black-

jack, but he did not know that his jaw was fractured. He thought that he had an abscessed tooth. Be careful to examine every swollen jaw before extracting.

Hires Dentist and Oculist for Employees

LONDON, May 26—A successful system has been introduced at Bradford under which the workers receive the benefit of skilled dental and optical treatment.

The originator of the scheme is John Emsley, a dress goods manufacturer. Convinced that bad teeth were the direct cause of much illness and consequent broken time, he engaged a dentist to attend to his work people.

An oculist was engaged next, and it is officially stated that both treatments have yielded surprising results, broken time having been greatly diminished and spoilt work reduced to a minimum.

How to Hang the Flag

Flag Day's display of the national colors raised a new question of the proper way to hang the flag. The controversy was carried to the general staff of the army, recognized as the authority on flag etiquette, and the decision is that whether hung vertically or horizontally, as on a porch or wall, the stars should be on the upper left corner, looking from the outside.

The theory is interesting. In this position the stars are on the right corner as viewed from within the porch or building. The military regulations require that the flag shall always have the position of honor—the right. It is held that the flag displayed on porch or wall represents the owner and must be hung so that the field of stars is on his right, regardless of that being the left of those viewing it from without. The point is cinched by the observation that it is his flag and not theirs. So hereafter hang the flag with the stars in the upper right corner as you look out and you will be sure you are correct.

Personal Observations Gathered From Treatment and Care of 4,000 Children

By THOMAS P. RYAN, D. D. S., Minneapolis.



CLASSIFICATION of children into groups: I. 2 to 7 years. Consideration of conservation of deciduous and six year molar.

II. 7 to 12 years. Consideration of timely removal, as well as conservation of deciduous teeth with particular attention to their bearing upon eruption of second dentition.

Groups I and II afford cases of delayed extraction and premature loss causing irregularities necessitating orthodontic and corrective work, to alleviate difficulties in securing normal functioning masticatory organs.

We have co-operated with the medical profession with particular reference to adenoids and tonsil trouble and with pediatrician with reference to nutritional problems.

An interesting observation has been that of symmetrical decay, the four six-year molars being most typical with remaining teeth healthy, or the deciduous fours with dental caries and remaining teeth healthy.

The problem of focal infection is now so familiar to the dental profession that I shall

not burden you with statistics of blood counts, urinalyses, etc. Speaking in generalities, we have had many cases of the undernourished with no ambition, general lassitude, frequently neurasthenic and irritable, loaded with focal infection, mouth breathers with characteristic V-shaped superior maxillary arches, who, through combined medical and dental prophylactic work and proper nutrition and corrective treatment have developed into active, vigorous boys and girls.

One typical example: Boy four years old, Polish, came to clinic in 1918, pale, underweight, undernourished, generally subnormal, frontal headaches and large tonsils, abscessed deciduous teeth. No ambition; questionable as to whether or not he would live. We have watched this boy periodically for four years; began with the teeth, prophylaxis, some necessary extraction, much silver nitrate, some reparative work, could not at that time give him an anesthetic; he would vomit if you would look at him. Combined medical and dental treatment have eradicated infection, slowly of course, and with proper nutrition built up a strong, active boy. He can now take an anesthetic

with ease; plays enthusiastically; successful in his school work. This is but one of several examples.

Method of Handling Children

Mouth toilet—The use of iodine (Talbot's generally) religiously, use of silver nitrate in all cases of deep caries, particularly so-called leathery decay. Use AG NO₃ in whatever combination the silver nitrate effect can be secured with least irritation. Often used in combination with Carbol Eugenol in extreme hypersensitiveness; also use preparation of Sterident. Generally with proper drying of cavity 20 per cent AGNO₃ can be used direct, followed with successive applications of higher percentages.

Brushing of teeth—Many of our clinical patients, of course, having never used a tooth brush, and some who have brushes, using them but once a week, or less frequently, it would be too sudden to expect them to brush four and five times a day from the start. The shock would be too great, and so I try to encourage the child to begin by brushing twice a day—morning and night—impressing the necessity of thorough brushing at these particular times and demonstrating proper methods, of course, with small brushes and by seeing the little patient at future times, gradually leading him up to more progressive methods in the home care of the mouth. Sometimes, in the

less receptive child, we believe in only taxing him to one daily brushing, recommending this at night, and gradually developing him through a slower process.

Different types afford interesting psychological study and must be handled accordingly. Instruction is always individual, despite the amount of group instruction taking place. In private work, the co-operation of the mothers is easily secured and very soon makes a showing with the child.

In clinical types, the child frequently educates the mother.

The co-operation of the father at the chair is frequently effective while the presence of the mother is frequently a detriment. I have tried this with success, following the suggestions of Dr. McGinnis of Chicago.

Probation Method—I have frequently, in extremely filthy mouths, after explaining the necessity for certain prophylactic and reparative work and impressing its importance upon the child, either recommended or given him a tooth brush, and, with a little "Billy Sunday enthusiasm," tried to drive home the necessity of a strong right arm and a little vigilant brushing in the care of the mouth, as well as the playing of baseball, and placed him on probation for two weeks, more or less, depending upon the extent of the debris, and the presupposed ambitions of the child, explaining that if he is

interested in the care of his mouth, he will manifest such interest by getting to work at once and when the patient returns, there is generally a marked improvement, furnishing a more desirable field of operation.

It is well to illustrate this by having child observe the mouth in a hand mirror before and after home care. I also use these mirrors frequently in ordinary cases of green stain before and after removal. It is a good object lesson. I find that the probation method is particularly successful in boys who are apt to be a little more careless in their work.

That preventive and educational dentistry will serve their place in the community I believe is an undoubted fact.

It is brought home almost daily by the parent suffering from dental caries, malocclusion, etc., who will remark, "They did not say very much about baby teeth when I was a youngster"—or "If we had known more about the value of our teeth, we certainly would have gone to the dentist and had them cared for"—or words to that effect. "But you can bet Helen and Charley are going to be sent at regular intervals, because I want them to save their teeth."

The use of kindergarten pictures and many anomalies, comparisons, etc., make an operating room attractive and interesting to the child and create an atmosphere of satisfaction and contentment.

There is frequent questioning by business men as to the necessity of preventive dentistry: What are we accomplishing? Is it worth while? Will this in the future reduce the proportionate amount of extraction? We must admit that there always will be necessity for such extraction and the trained exodontist will maintain his well-earned place, but must we not reduce the proportion of the amount of extraction by education, preventive and corrective dentistry, as well as through the reduction in the removal of pulps with new types of bridgework, etc.?

Despite the terrific demand for immediate remedial and surgical relief, especially in clinics where oral hygiene education has not reached and penetrated as extensively, the profession in general, with oral hygiene enthusiasts as leaders, must preach and teach preventive dentistry, as the only possible ultimate solution of the difficulties, as there will probably never be enough dentists to sacrifice time among these patients to cope with this endless chain proposition.

During the recent dental survey of the Minneapolis Public Grade Schools, there was splendid opportunity for observation of malocclusion.

I was assigned to work in three schools among the wealthier classes. These children received dental attention. My own clinic is in the opposite, or poor section, of the city

where children's mouths are neglected.

Comparing children from the two sides of town, one receiving dental care, and the other practically none, to me the outstanding feature is the problem of nutrition.

Barring hereditary influences, it would seem that the problem of nutrition is almost paramount in the development of healthy mouths and bodies in accord with the opinions of many of our physicians and dentists of today.

More Indiana Girls Use Tooth Brushes Than Boys

Twenty per cent more girls than boys use tooth brushes according to data obtained in a dental survey conducted in Indiana schools last fall by Dr. Earl Brooks of Noblesville, Ind., president-elect of the Indiana Dental Association. "Girls are more careful of their teeth than are the boys," Dr. Brooks said. The survey was authorized at last year's convention. Rural health nurses examined 22,863 children, 11,192 being boys.

The survey showed that only 38 per cent of the boys use tooth brushes, while 58 per cent of the girls cared for their teeth. As the result, the canvas reported that the former had teeth 15 per cent cleaner than boys.

"The survey," Dr. Brooks explained, "readily convinces one that brushing the teeth is advisable, because 75 per cent of those using a brush had clean teeth, while only 32 per cent of those who did not brush them had clean teeth."

Dental Clinic Opened for Veterans of War

BOSTON, MASS.—The new 15 chair dental clinic at the district office of the U. S. Veterans' bureau here, now is open. All further dental claims of ex-service men living in and around Boston will be cared for at this clinic.

The new dental clinic has all modern dental equipment and appliances. Dr. Arthur E. Brides, district manager of the bureau, states that by establishment of such a clinic, in addition to expediting the care and treatment of the ex-service men, the government will save more than \$60,000 each year.

A force of 12 dental operators, one oral surgeon, two oral hygienists, two nurses, eight dental assistants and two laboratory assistants are to be employed in the government's organization. All have been selected by a group of expert dental examiners following a thorough examination.

Dental Prophylaxis

By R. N. DOUGLAS, D.M.D., Elkhart, Ind.



DENTAL prophylaxis," according to Fones, who is an authority on this subject, "is that scientific effort, either operative or therapeutic, which tends to prevent diseases of the teeth and their surrounding tissues."

It includes a great deal more than the mere word "cleaning" suggests.

Prophylaxis has to do with all pathological conditions of the mouth which must be restored to normal functioning before a procedure can be called a prophylactic one. Naturally this will include all of the daily operations with which the general practitioner has to deal, such as the proper filling of a tooth, so done as to prevent future decay, building of proper contact point, proper construction of crowns and bridges, the correction of malocclusion, and the removal of calcareous deposits and polishing of the teeth.

The latter operation is the one of which we usually think when speaking of prophylaxis, and is the one which we will now consider.

The initial cause of nearly all pathological conditions of the mouth is the micro-organism, mixed with decomposing food left in the mouth. No better incubator of infesting bacteria exists than the mouth.

Consider the ideal conditions under which these bacteria thrive and multiply. The correct temperature, sufficient moisture, air, the absence of light and last, but most important, a good diet upon which to subsist.

Micro-organisms become comparatively inert if robbed of their food supply but give them pabulum upon which to thrive and they become active, multiply and, if in sufficient numbers, become a menace to one's health and well-being.

Within the last five or ten years we have heard a great deal concerning focal infection. In some cases undue stress has been laid on this as a factor of ill health. But still it is of sufficient importance in our present knowledge of medicine and dentistry that it cannot be overlooked. If surface abrasions are omitted, we learned in school there are but three ways by which bacteria can gain entrance to the blood stream, (1) through defective teeth and surrounding tissues, (2) through the tonsils and, (3) through the intestines.

When we consider that all three of these methods involve directly or indirectly the mouth and tissues therein, the importance of clean mouths and clean teeth cannot be overestimated.

What has been gained by placing a beautiful gold filling,

a well-constructed piece of bridgework, or a perfect amalgam filling, in a mouth filled with dirty, scummy teeth supported by inflamed and diseased tissues?

When certain of my patients present just such mouths as the above described, I invariably tell them of the worthlessness of spending money to have their dental troubles corrected, if they make no endeavor to keep their mouths in a good, clean condition. Besides the factor of infection we have to consider the short life of work, often well done, which is placed in mouths unfavorable because of unsanitary conditions.

For years many efforts have been exerted to find some drug which, when used in the mouth, would create a sterile condition or at least would render the bacteria inert. Many chemists claim that it is impossible to find a drug which will kill the bacteria of the mouth and still not destroy the tissues. At any rate so far as the author knows no such substance has yet been discovered, and until it is, the duty falls upon us, as dental practitioners, to do all we can to alleviate these unclean mouth conditions which are so common in our daily practice.

In my daily practice I am continually reminded of the failure of most dental practitioners to give this work their conscientious consideration. I feel as if there is no one operation in our field today that is so commonly slighted as prophylactic work—that work which usually receives the incorrect name of “cleaning.”

That operation, well done, includes much more than the word “cleaning” suggests. A patient ought to present himself with his teeth cleaned before he comes to the office. I confess not all of my patients have been educated to it. Why this laxity on the part of the dentist to observe this most important operation, I do not know.

Suffice to say that it is impossible to do permanent work in some mouths without first carrying out a thorough prophylactic treatment.

Some day, every state in the Union will have a law qualifying the dental hygienist to practice. When that time comes the dentist can shift the responsibility onto the hygienist who, being a specialist, will be able to give this work its proper consideration. In this particular I would refer you to an article in a recent issue of *Dental Summary* entitled “Why We Need the Hygienist,” by Dr. A. C. Fones.

Because of the apparent need of more careful work in performing this very necessary operation or perhaps, the apparent lack of knowledge of procedure, I present for your approval what I deem a simple method of prophylaxis—a method which I use every day at the chair and which has up to the present served its purpose. Your essayist does not claim to present anything new in prophylactic technique but

merely wants to review those steps which you were, no doubt, taught in school with the hope that you will profit to the extent of doing more careful and better prophylactic work in the future.

The first thing to be done is to note the general condition of the teeth and surrounding tissues. The enamel surfaces of the teeth usually present a dull, slimy appearance, with stains often to be found on the necks of teeth. The latter is noted especially in children.

Calcareous deposits are usually found to some degree on all the teeth but in more abundant quantities on the buccal surfaces of the superior molars and the lingual surfaces of the lower incisors. And let me say here, that just because there are no visible deposits on the teeth it is no sign that none are present. I often see cases where the teeth seem to be reasonably free from tartar, but, when the area under the free margin of the gum is reached with the scalers, hard deposits are found which can only be removed with difficulty. I find very few adults whose teeth are free from tartar. However, in the average case, the patient who has prophylactic work done at regular intervals has comparatively little tartar clinging to the necks of the teeth.

The gum tissues should next be examined.

Congested gums which bleed upon the slightest touch are not a rarity. In fact I find them in many of my cases and

without exception in the cases where there is a considerable collection of tartar.

The deep red color is due to the stagnant condition of the blood and is caused by any local irritant. If the periodontal membrane becomes irritated or infected it does causing absorption of an area about the tooth. This results in a so-called pocket about the neck of the tooth in which food particles and bacteria lodge. The seriousness of such a condition is readily realized when we consider the root of the tooth is the most important part of the tooth and when the tissues supporting the root become infected, the root itself lies within the danger zone.

How much better to prevent the original trouble at its source than to have to go through surgical treatment that always results in weakened tooth structure.

As regards the calcareous deposits themselves, the fact should not be overlooked that they are of a very porous nature, capable of absorbing food debris and therefore a good retainer for bacteria. As such it becomes absolutely necessary for the health of the teeth and surrounding tissues that these deposits be removed at regular intervals.

Let us consider for a few moments the practical work involved in dental prophylaxis.

A true prophylactic treatment must necessarily be painstaking and exacting. It constitutes a "frequent and

the case of systematic removal from every surface of every tooth, granular deposits and plaques by instruments and hand polishers."

Much more efficient work can be done with a few instruments of proper size and shape and used properly, than with many. For this reason I use for the average cases a large and small Whitten scaler, medium and small spoon excavators, both right and left, and, in more serious cases where the tartar clings to the tooth, root files of suitable shape for the various positions.

Before beginning instrumentation it is well to spray the teeth to remove all loose particles of food and debris which the patient may have inadvertently overlooked in brushing. The mouth should then be rinsed with warm water.

In order to reach systematically every surface of every tooth, there must be a definite starting point and a definite place to finish the scaling. What system is used is of little consequence so long as it serves its purpose. I carry out the following plan because it seems the most natural one to follow: Beginning on the buccal surface of the superior right third molar, disto-buccal angle, I proceed mesially to the right central. The same direction is now followed, but the direction becomes distal on the left side, continuing until the disto-buccal surface of the left molar is reached. Again starting on the disto-lingual surface of the superior left third molar

instrumentation proceeds until the same surface of the third molar on the right side is reached.

On the lower jaw, at a point corresponding with that where the work was started on the upper jaw, the buccal surfaces of the inferior teeth are next scaled working mesially to the right central and distally to the left third molar. The work then progresses back on the lingual surfaces in like manner, as above. The distal surfaces of the third molars must not be overlooked inasmuch as they are usually given little consideration by the patient in brushing the teeth.

I have already mentioned the instrument used in the above procedure. Now as to the manner of instrumentation: I use the large excavators—either Gillet or Darby-Perry—for scaling of buccal and lingual surfaces of all the teeth. On the lingual surfaces of the lower incisors, I find it better to use a smaller spoon for, of all places, this is the most difficult to scale without injuring the gingival tissues and the narrower edge can be used here to much better advantage. As suggested before, root files found in pyorrhea sets usually are very efficiently used on the lingual surfaces of inferior anteriors in removing final particles of calcareous deposits and smoothing up these surfaces.

I scale the mesial and distal surfaces as the work progresses although some prefer to make this a separate step after the

buccal and lingual surfaces are scaled. Here again I use the medium and small scalers removing the thick coating of deposit with the larger scaler and completing the process with the smaller one which fits into the approximal spaces better.

In either case it is best not to use too large an instrument because, with the large instruments, that delicate touch, so essential in scaling, is lost.

Like any other operation, the touch can only be acquired by constant practice. A firm hold on the instrument and a secure brace of the hand is absolutely essential in all positions lest the point of the instrument slip and cut too deeply into the tissues.

Frequently patients complain of hyper-sensitiveness around the necks of teeth following removal of heavy deposits. This is due to sensitive areas being exposed which were formerly protected from external irritation by the deposits.

Fones recommends the use of a half teaspoonful of sodium bicarbonate to a third of a glass of warm water as a mouth wash to tide over this period. This neutralizes any acids which may be irritating the sensitive tissues.

The question of bleeding of the gums during instrumentation is not a serious one. I mean by that, that although the factor bringing about such a condition of the gums is serious, the bleeding itself is not alarming and can readily

be taken care of. This bleeding as before suggested, is due to congestion and naturally is to be encouraged rather than hindered, so as to allow all the stagnant blood to be removed. It is not desired to lacerate the tissues but bleeding may be stimulated by gentle pressure with the blunt end of an instrument. It is well to remember than healthy gums will not bleed.

The final procedure is the polishing of the teeth. Fones states that it is impossible to obtain the same results in prophylaxis with the use of the dental engine in polishing as may be secured by the hand polishers. In this I agree, for this reason: the delicate sense of touch necessary for this work is practically lost in the use of the engine, while with the hand polishers it is very acute. The latter will reach into the inter-approximal space where it is practically impossible for the brush wheel to polish. Unless extreme care is taken the gingival borders are very apt to be wounded by the brush revolving at several hundred revolutions per minute. I confess the use of both in my own practice. For the hand instrument I use the ordinary Porte polisher with orange-wood stick. As a slight abrasive I use a fine grade of pumice moistened with a little water or glycerine. Dr. L. H. Wirt recommends the use of powdered silex in lieu of the pumice. He contends that the peculiar shape of the crystals in silex makes

a better polishing medium than pumice. Whichever is used it is well to make sure that it is of a very fine quality and not too abrasive.

Just as in scaling, there should be a definite system for polishing the teeth. I cover the surfaces first with the hand polisher and then follow up with the brush wheel. The occlusal surfaces of the teeth must not be overlooked. Nothing equals the straight brush wheel for polishing the pits and fissures of these surfaces.

If polishing will not remove the green stains and plaques often encountered in children's teeth, tincture of iodine applied to the dried surface will be found helpful. The iodine assists chemically in breaking up the plaques. It is also a splendid disclosing solution if there is any doubt in the mind of the operator as to whether or not all the stains are removed.

Quite essential in polishing is the removal of food debris in the inter-proximal spaces of the teeth. In the use of the floss silk care must be taken to use just sufficient pressure at the contact point to allow the floss to snap through without injuring or cutting the soft tissues. Needless to say that I recommend the use of the floss silk in the home care of the mouth. For polishing and smoothing the approximal surfaces, particularly on the lower jaw where the tartar is difficult to remove entirely,

I find the fine Cuttle fish or finishing strips ideal.

I complete the prophylaxis work by spraying the teeth with some good mouth wash. Sufficient air pressure should be used to remove all loose particles. The spraying not only tends to heal the gum tissues, but also gives added luster to the teeth, which is very desirable so far as the effect on the patient is concerned.

In conclusion, we cannot overlook the necessity of proper home care of the mouth to supplement the prophylactic treatment. As the majority of people are uninformed as to the proper care the teeth should be given, it is the duty of the dentist to give them such instructions as he finds necessary.

In this particular you will not find the average person an apt or willing pupil. They will absorb to a degree all you tell them and perhaps practice it for a few weeks. But they usually do not keep up the home care long enough for it to become a habit.

A few do, however, and it is for these few converts that we must continue to preach even though it does sometimes seem a hopeless task. There is little room for argument as to the benefits a patient will derive from such a treatment.

Preventive dentistry is economical while good operative dentistry is expensive. The future of dentistry lies in prevention rather than cure, and is the one hope of ridding

humanity of the ravages of decay.

In this rapidly-changing world of ours it is not impossible that some day a great preventive of decay will be discovered by the use of which all people can reach a ripe old age without encountering along

the way, any of the dental difficulties with which the present generation has to deal.

But until that time comes it will be necessary for us, dental practitioners, to resort to our present great preventive-prophylaxis.

How Little Children May Enter Public Schools with Most of Their Physical Defects Remedied

Entertainingly presented in a brief report just issued by the Health Service, New York County Chapter, American Red Cross, is the story of a co-operative demonstration giving results of the physical and mental examinations to over 1300 New York City children upon registration before entering school. It tells in a practical way how at the suggestion of the Committee on Education of the Civic Club, the New York City Department of Health and Education, co-operated with the Health Service of the New York County Chapter, American Red Cross, and the New York State Association of Consulting Psychologists in making over 1000 children of pre-school age fit to enter school. This was done by physical examinations given each child in the presence of the mother wherever possible; by provision of oral hygiene and a follow-up nurse from the Red Cross to remedy physical defects and by the grading by the psychologists, of the children in accordance with their mental tests.

The pamphlet has tables and four graphs giving the results of the physical and psychological examinations. The whole scheme of co-operation is so carefully worked out and at the same time so simple that it is believed it will be a valuable suggestion, and in many cases, a real guide for those interested throughout the country in problems connected with children of pre-school age. The pamphlet is issued by the New York County Chapter, Health Service, American Red Cross, 598 Madison Avenue, New York City, primarily for distribution to educators, public health officials, physicians, nurses and social workers. Copies may be secured on application.

A Real Hobby

By B. S. ALLEN, D.D.S., Greenville, S. C.



E dentists are accused of being the greatest faddists on earth, which is not so bad, as each fad that comes and goes leaves us knowing more one way or another and, by our constant research, we are pretty well up on some other subjects foreign to dentistry.

Every fellow should have a hobby that carries him out of the realm of his every-day calling, to give him a mental rest and make him more fit and capable for the exacting duties of dentistry.

For some time I have been delving into wireless, and have found it a very interesting and entertaining hobby. My receiving set is home-made and works fine. At night I am able to hear concerts from Schenectady, Detroit, Pittsburgh, Newark, Chicago and various other points.

This wireless game is only in its infancy and I believe the time is near when our dental supply houses will be equipped with receiving and sending sets so that we can talk to them any time (free of charge) about our wants. Provided of course we don't owe them such a bill that we haven't the nerve to speak to them.

Also what about the laboratories? You could literally burn them up when your plates and bridges don't fit

or when the work is delayed. But that is *too much* pleasure to expect on short notice!

Now to give you an idea about how to get into the radio game and how much a satisfactory receiving set will cost, and how to set one up and what you can hear:

Not much use for a beginner to attempt to install a sending set until your "bug" grows sufficiently to do it at a small expense.

A receiving set capable to hearing concerts etc., over a distance of around 1000 miles can be purchased and installed for about \$75.00.

Of course there are various items you can add to this set after you get familiar with it, but for this amount you can get a lot of entertainment.

Consult some radio fan in your community about different parts to help you get started. It will save you some money as reading ads doesn't give you the proper insight into setting up a complete receiving set. Not very many are sold complete.

Any man that has a boy over twelve years of age will find that the young fellow will grasp this for a hobby very quickly and will be explaining it to you before he is aware of it and that he will be home nights instead of chasing Bill Hart over the tough joints of the West—and he certainly will learn more. Try it!

“In the Dentist’s Chair”

“In the Dentist’s Chair,” was written by Mrs. M. E. Schnabel, late of St. Paul, and published originally in the *St. Paul Pioneer*, fifty years ago, say the *St. Paul Dispatch*, from which it is reprinted. At the time of its publication it was widely quoted, and caused considerable amusement. A copy of the poem was rediscovered recently by George E. Schnabel of White Bear and St. Paul, husband of the writer. A note at the end of the verses is dated November 2, 1871, and declares they were “written after five days’ experience at Dr. Beecher’s, in Saint Paul.” Dr. Beecher was a well known St. Paul practitioner half a century ago.

Be it carved from the choicest of tropical trees,
And gilded and stuffed just as fine as you please,
There is nothing so fills me with hopeless despair
As to know I must sit in the dentist’s chair.

No words can describe the feeling of dread
As I open my mouth and throw back my head;
My heart ceases beating—I anxiously wait
To learn from the doctor my terrible fate.

“Two cavities there—a cavity here,
And the nerve is exposed in the last one, I fear;
This piece of amalgam is worn out and old—
If the tooth stands the pressure I’ll fill it with gold.

“We’ll examine still farther, please lift up your head;
Oh, this eye tooth, I find, is already quite dead!
It is weak at the best, I’ll see what I can do—
It will take a long time, and I’m sorry for you.”

“Oh, never mind, doctor, but please do begin,
I can scarcely endure the suspense I am in;
I have mustered up courage to come here today,
And though I do dread it, I dare not delay!”

A kind of bewilderment seizes each sense
As I see him preparing—his work to commence,
I dare not the slightest resistance to make,
Though I feel like a martyr just tied to the stake

I try hard to be brave—I’m too old to complain,
So I conquer my feelings again and again;
Remembering the way to preserve my own youth
Is to take jealous care of each precious tooth.

Such scraping and cutting you never did hear—
Oh, oh, how that filing does grate in my ear!
But I find it more easy to do as I am told
While the doctor compresses the clippings of gold.

Now he takes up his mallet (suggesting croquet).

But before I can utter he's pounding away!

This tooth is so sensitive, what can I do?

Why, only wait patiently till he is through.

Yet, hour after hour and day after day,

I find I must pass in this same painful way;

And oh, such a wearying, worrying time—

Too tedious almost to mention in rhyme!

I don't wish to be selfish, and really do try

To think of the dentist more weary than I;

And I know very well, when once I am free,

I shall heartily thank him for torturing me!

Teeth Furnish Almost Complete Proof of Identity When Compared With X-Ray Films.

Teeth included with the bones recovered from the ashes of the cottage occupied by E. J. Salistad at Lake Nebagamon, after the fire on the night of August 26-27, 1920, and submitted to him for examination are so consistent with the X-ray films of Salistad's teeth as to furnish almost absolute proof that they belonged to Salistad, according to conclusions reached by Dr. C. H. Bunting, pathologist at the University of Wisconsin.

Dr. Bunting made known the conclusions reached by himself and assistants following examination of the remains in a report to Attorneys John and Peter Cadigan of this city, counsel for Mrs. Leona Salistad-Richardson in her suit to recover more than \$65,000 of life insurance carried by her first husband. In his report Dr. Bunting says:

"The facts that can be established at present are:

"A body and not a mere collection of bones were present in the fire.

"The body had not been embalmed."

"A sufficiently hot fire was created to consume the body.

"The bones are those of a male human of an approximate height of 5 feet 6 inches.

"The bones show the age of the individual was above 21 and less than that of the senile period.

"The teeth found are consistent with X-ray films of Salistad's teeth, so consistent, in fact, as almost to furnish absolute personal identity."

Correlation in the Teaching of Dentistry and Medicine*

By DOUGLAS VANDERHOOF, A. M., M. D., Richmond, Va.

Professor of Medicine in the Medical College of Virginia.



I have come to see in the last few years that dentistry is a branch of medicine of the same dignity and importance as pediatrics, obstetrics, gynecology, or any other specialty. * * * * The new school of medicine will, it is hoped, undertake to place training in dentistry on the same academic and scientific level as training in medicine and surgery." These remarks, made by Mr. Abraham Flexner, Secretary of the General Education Board, in June, 1920, at the announcement of the establishment of the new schools of medicine and dentistry at the University of Rochester, have a pertinent bearing on the relationship of medicine and dentistry that is becoming recognized today in our professional schools as well as in our clinical practice.

We are all well aware of the striking changes that have occurred in the past fifteen years in the teaching of medicine. In 1906, there were 162 medical schools in the United States. Of these 162 schools, thirty were organic depart-

ments of universities, forty-eight had university affiliation, while eighty-four were privately owned. In 1920, there were but eighty-five medical schools,¹ due to the discontinuance of some schools and the merger of others. Along with this reduction in numbers has been the effort to establish the control of medical education in the universities, and to raise the entrance requirements, first to one year, then to two years of college work. Of these eighty-five medical schools, sixty-six or 77 per cent are classified as university departments.²

It should interest physicians to realize that the same general movement toward university control shown by the medical schools has also taken place in the schools devoted to the teaching of dentistry. Of the forty-seven dental schools now in existence in the United States, eight were originally established as organic parts of universities, while thirty-nine were privately owned or affiliated with universities. Today we note that thirty-one dental schools are organic departments of universities, while sixteen are privately owned or affiliated. The following table, from the address of President Black³ at the last meeting of the American Institute of Den-

*Chairman's Address, Conference on Medical Education, Southern Medical Association, Hot Springs, Ark., Nov. 14-17, 1921. Reprinted from *Southern Medical Journal*.

Teachers, shows in a graphic manner the development of university dental schools to the gradual exclusion of the privately owned dental institution.

TABLE 1. SHOWING THE NUMBER OF DENTAL SCHOOLS IN THE UNITED STATES, WITH THEIR STATUS AT THE CLOSE OF EACH TEN-YEAR PERIOD.

	Private or affiliated	University Department	Total Schools
1840	1	0	1
1850	2	0	2
1860	3	0	3
1870	8	1	9
1880	12	5	17
1890	21	11	32
1900	41	14	55
1910	32	23	55
1920	16*	31	47

*Of these 16 schools, two are affiliated and 14 are privately owned.

From this table it is apparent that 66 per cent of the dental schools in the United States are now under full university control, as compared with 77 per cent of the medical schools.

Of the 162 medical schools existing in 1906, only four required premedical college work for matriculation. In 1920, seventy-nine schools, out of a total of eighty-five, required two or more years in liberal arts for admission to the study of medicine. Up to the present, the majority of dental schools have required only four years of high school education as a prerequisite for matriculation. A significant advance is seen, however, in the fact that fifteen dental schools in the United States and Canada, beginning with the present session of 1921-22, are requiring one predental college year.

In 1905, the Council on Medical Education adopted an "ideal standard" for medical

education in which the medical schools were urged to require for admission one year of college work, including courses in physics, chemistry and biology. Now, in 1920, we find 92 per cent of the eighty-five medical schools demanding, not one year, but two years in liberal arts. Since January 1, 1918, this requirement of two pre-medical college years has been an essential for a class-A rating of schools of medicine.

A recent classification of the dental schools in the United States showed that out of a total of forty-seven schools only nineteen were class-A institutions. Of these nineteen class-A dental schools, all but two are associated with schools of medicine. Only two of these class-A dental institutions are located in the South, the School of Dentistry of the Medical College of Virginia, in Richmond, and the School of Dentistry of Vanderbilt University, in Nashville.

It is quite evident that a distinct advance is taking place in dental education in every way comparable to the increasing requirements of the schools of medicine. The important role of dentistry in the prophylaxis and treatment of many systemic disorders having their primary focus in infection about the teeth has become very obvious in recent years.⁴ This recognition of the grave dangers attending alveolar infections has not only emphasized, in a striking manner, the crying need for skillful

and competent dental technic, but has served to elevate the practice of dentistry from a largely mechanical profession to a true specialty of medicine, comparable in dignity and importance to that of the ophthalmologist, laryngologist or otologist.

This changed status has been realized by none more promptly than by the members of the dental profession, and a perusal of current dental literature discloses the keen responsibility that the dentists feel in both the prophylaxis and correct treatment of mouth infections.

To many minds there comes a feeling of pity akin to sorrow that dentistry was ever separated from medicine. At one time the two professions were united and, while Harris and Hayden, in 1839, may have had good reasons to withdraw from the medical faculty of the University of Maryland to found the first dental school in this country, the present sentiment on the relation of dentistry and medicine all make for their reunion.

Just as the Council on Medical Education proposed its "ideal standard" in 1905, so the various dental organizations are now engaged in discussions of ideals in dental school requirements. It is very evident that progress is being made, but it is equally evident that there is a hesitancy in advocating the same standards for dentistry as for medicine. If it has been demonstrated,

however, that dentistry is really a specialty of medicine on a full and equal footing with rhinology and laryngology, for instance, why should not the standards of the competent dentist be equal to those of the properly trained nose and throat specialist? As a matter of fact, there is, and can be, no distinction between them in their important services and contributions to medicine in general. That there has been a distinction in the past is obvious. This has been due in part to the ignorance and aloofness of the medical man as regards dental practice, but in a definite measure it has also been due to the visionless dentist who saw only a mechanical proposition in the mouths of his patients. Now, this is all changed. The physician makes urgent calls on the dentist for real aid in preventing and treating many bodily ills, and the dentist is beginning to employ technicians to do much of the mechanical work, leaving him relatively free to study and solve the bigger problems of the relation between mouth infections and the general health. "I can not see," said a Boston dentist recently, "why a dentist, educated to take care of the mouth and do all the dental work necessary in that mouth from a surgeon's standpoint, should make and put in plates or do any of the laboratory work any more than I can see any sense in the proposition that an oculist who removes an eye and prepares the socket for a glass eye should,

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in his own laboratory, make the glass eye for the patient."

There are a great many members of the dental profession who firmly believe that the dentist should have an M. D. degree before he can properly qualify as a dental practitioner. Very many medical men—and their number is increasing—also take the same stand. This question has been discussed in numerous organizations and in several of our states. Regardless of this important question of the degree, the more essential fact stands out that the dental practitioner should have the same educational advantages and meet the same pedagogical requirements as the medical practitioner or surgical specialist. To this end, "ideals" must be established and gradually enforced. As has been pointed out in the earlier part of this address, there is a strong tendency toward university affiliation and control on the part of many medical and dental schools. The independent schools, many of which have done really excellent teaching, judged by standards of the past, are fast disappearing, and the near future will undoubtedly witness all teaching of medicine and dentistry under the complete control of the large universities that are already heavily endowed or adequately supported by the state. When this ideal situation is attained it is earnestly to be hoped that the primary and secondary schools in the

country can be so ordained that the reasonably adept pupil may enter high school in his fourteenth year. Under such circumstances he could enter college or the university certainly by the age of eighteen years. After two years of academic work, but with continued university standing, he should be able to enter the school of medicine at the age of twenty. There is every reason to insist that his first two years of medicine, consisting almost entirely of the sciences and laboratory work, should entitle him to the degree of Bachelor of Science at the age of twenty-two. The next two years should permit of properly chosen "elective" courses, already in vogue in some of the very best medical schools in this country. These elective courses, properly selected, may lead at the age of twenty-four to the degree of Doctor of Medicine, Doctor of Dental Surgery, Doctor of Public Health, etc. In such a scheme there should be no distinction or discrimination in the instruction of the dental student, which has been justly criticised under present conditions, in the first two years of the professional course.

Finally, after securing his doctor's degree in his twenty-fourth year, the student should be encouraged to continue his training for one or, preferably two years as an interne or assistant clinician in a qualified hospital, or else accept a fellowship in a specialty of

Mouth Photography

By H. HOWARD POWERS, D. D. S., Bay City, Mich.



TWO foreigners entered the office of an exodontist. Above the dental office was a photograph gallery of the ten-cent variety. Greeted by the assistant, one of the visitors made motions toward his face and she accordingly placed him in the chair.

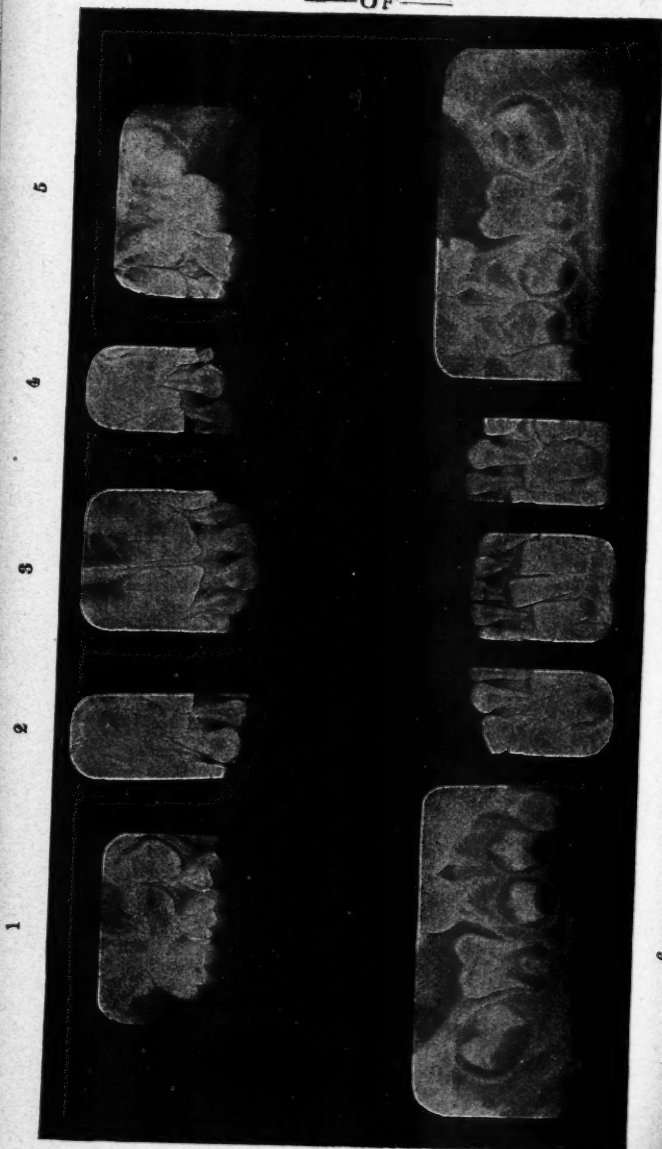
Upon examination of his patient's mouth the dentist found only one tooth decayed and advised its extraction.

In the meantime the other foreigner had edged up close and stood waiting at the side of his companion. The patient made another motion face-wards and the dentist concluded he was requesting him to do the extraction, so he engaged the tooth with a forcep.

The patient yelled; his friend ran out of the room and down the stairs. Pandemonium reigned. But the dentist possessed tenacity and, with the assistance of a half-nelson, stuck to the ship until the tooth was removed, whereupon the patient arose with unseemly haste and followed his friend, letting out a yell for every jump.

An hour later an interpreter for the two arrived and stated that his friends were looking for the photograph gallery and had gotten into the dental office by mistake.

To those of you who doubt the truthfulness of this story, I say that I can prove its authenticity, for I was the dentist, and dentists never lie. I need only to add, in order to make the story complete, and to have it end as many dental stories end, that I never received any remuneration for the operation.



6
Radiographs of Child Six Years of Age, Showing 20 Temporary Teeth and 20 Permanent Teeth. (At that age the child had 20 permanent teeth.)

Department of Pediadontia

W. A. BRIERLEY, D.D.S., Denver, Colorado

Contributing Editor

Why Save the Baby Teeth?

By PAUL A. BARKER, D.D.S., Denver, Colorado

*Dr. Barker explains the danger of neglecting the temporary teeth,
in the Denver School Review*



HE picture printed opposite will show very graphically to all those who read one of the most important reasons why every effort should be made by parents to save the temporary or baby teeth, which Nature gives to the child to serve him during the first twelve years of his life.

The picture is a radiograph or X-ray of the mouth of a child six years of age, and shows twenty baby teeth and twenty-eight permanent teeth all in place. At this age the third molars or so-called wisdom teeth have not begun to form and so are not in evidence.

You will notice that a permanent tooth is formed immediately under each and every baby tooth and in the case of the molars the permanent ones lie exactly between the spreading roots of the baby molars, thus showing Nature's wise provision of using the roots of these baby teeth as guides

to bring the permanent ones exactly into the position which they should occupy in the mouth.

But, many people will ask, "How are these baby teeth to be shed, in view of the fact that their roots are so long and they are so solid?" There is going on in every child's mouth at this age a wonderful process of formation, absorption and eruption, which demonstrates in a marvelous way how an all-seeing Mother Nature does her best to provide her children with straight, healthy teeth. These baby roots which in figure (10) are long and solid, will gradually be absorbed until they have disappeared entirely as is shown in figure (8), and the baby tooth becomes loose and falls out, giving place and space for its permanent successor underneath.

The calcium salts which are absorbed by the blood stream from these baby roots are immediately used in the for-

mation of the permanent teeth, thus another example of Nature's wonderful economy.

There is, however, one thing which seems to be vitally necessary to the normal absorption of these roots, and that is a live, healthy pulp or nerve in the baby tooth. We find that the roots of those baby teeth where the pulp is dead have not absorbed correctly and in many cases not at all. As a result they remain sticking into the little gums at all angles as solid as a rock, with the permanent tooth underneath growing and growing and trying to force its way into its proper position, but not being able to do so, follows the line of least resistance and erupts high up on the side of the gum or on the inside of the mouth, forming what is sometimes called a "tusk," regarded by many as an abnormality and something which should be immediately extracted. This is not correct. It is merely a permanent tooth gone astray for want of the proper space in which to erupt, and the child should be immediately taken to a competent dentist or orthodontist who will provide the needed space either by extraction of the unabsorbed roots or by spreading the dental arch.

It should, then, be readily apparent to all that for this one reason alone, the baby teeth should be cared for and all small cavities filled while they are small, for, as I explained in a previous article, a neglected cavity means a dead

pulp just as surely as night follows day and a dead pulp means unabsorbed roots, crooked permanent teeth, a mal-formed, under-sized face and in many cases mouth breathing with all the attendant ills which may follow. But if this one reason is not enough to convince, permit me to give you others:

Many mothers have the erroneous idea that there are no nerves in the baby teeth, while the fact is that the nerves in the baby teeth are larger in proportion to the size of the tooth than they are in the permanent ones, and as a result of this a cavity does not have to get very deep before the child begins to suffer. The large size of these nerves works against them, for they apparently die much easier than in the permanent teeth. Immediately after their death, the abscess forms at the ends of or in between the roots, containing the pus and gases which expand and try to escape from their bony surroundings, thus causing a terrific pressure on these tissues, with its consequent excruciating pain to the child, until the abscess breaks on the side of the gum, releasing the imprisoned pus and gas into the mouth and giving temporary relief. I say temporary relief because many times if left alone this fistula or so-called "gum boil" will close up and the same process is repeated. Is this right? Is it fair? Is it justice to the child to permit these baby teeth to decay

merely because we have been told that "they would soon fall out and didn't need fixing?"

This statement is, in itself, a contradiction, for most assuredly if they are not fixed they will not fall out, but will decay and remain.

And now for the last reason: It is impossible for a child to properly chew his food with a set of decayed, broken, abscessed teeth. The very best that he can do is to punch holes in his food and then bolt it, throwing on to the stomach the double task of mastication and digestion. Not being equipped for this extra work, the stomach rebels and we have our anemic, tired, undernourished child as a result.

There is one more point which the above picture brings out very clearly, and it is one with which the parents of every child should familiarize themselves, for it is of vital importance to the child. This point is the location of the sixth year molar, **BEHIND** the last baby tooth. In Figures 6 and 10 the large tooth in the center just erupting is the sixth year molar and the following points regarding it should be remembered:

It comes in directly behind the last baby tooth.

There is no baby tooth lost when it erupts.

It is the sixth tooth counting from the center of the mouth.

It erupts at six years of age.

It is the largest and most important tooth in the child's mouth and should be watched

constantly to prevent its decaying, for if it is lost no tooth will take its place.

Most assuredly the old adage of "An ounce of prevention is worth a pound of cure" is nowhere more applicable than in the mouth of a child, for it is much better to give a little care and attention to these baby teeth than it is to permit him to suffer from toothache during half his childhood days and then have to contend with a mal-formed mouth, decayed teeth and a ruined stomach, for the rest of his life.

The following comparative table will show very definitely that Denver is not exempt from this scourge of childhood. The figures are the result of a mouth survey which is now being taken in our schools and represent only those children under the third grade with the majority of them under seven years of age.

The first column shows schools, the second the number examined, and the third the percentage of mouths with one or more defects, the average being three cavities per child.

	%		%
Logan.....	131 57	24th St.....	244 86
Sherman.....	160 64	Carfield.....	155 87
Emerson.....	147 59	Corona.....	294 69
Stevens.....	196 52	Edison.....	238 77
Teller.....	194 41	Gard. Pl.....	350 83
Brownl.....	117 60	Thatcher.....	177 77
Wyman.....	180 64	McKinley.....	229 71
Pk. Hill.....	132 41	Vassar.....	57 58
Col'bine.....	165 70	Milton.....	50 87
Stedman.....	17 41	Reynolds.....	58 65
Mitchell.....	279 63	Univ. Park.....	73 63
Whittier.....	236 61	Steele.....	132 68
Swansea.....	131 64	M. Hill.....	147 61
Elyria.....	85 52	Lincoln.....	286 56
Hyde Park.....	180 72	Alameda.....	123 65

EDITORIAL

REA PROCTOR McGEE, D.D.S., M.D., *Editor*

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The Editor welcomes manuscripts and will take best possible care of any submitted, but cannot be held responsible for them. Manuscripts should be accompanied by self-addressed stamped envelopes. Typewritten manuscripts are preferred and should be double-spaced and written on one side of the paper only.

Good for Chicago!



CHICAGO has made a splendid beginning in community dental service in the survey of the scope of "Dentistry as Related to Public Health" that was made by Mr. Michael M. Davis, Jr. at the instance of Mr. Julius Rosenwald of Chicago. Mr. Rosenwald very properly realized that a firm foundation for a new movement can only be created after a study of other similar movements. Until this booklet, entitled "Community Dental Service," was compiled, there was not to be had so concise and well organized a statement of the needs and possibilities of the community dental service, in print.

The survey is divided under eight heads:

Every worker in oral hygiene and in public health should be provided with a copy of Mr. Rosenwald's survey, which may be obtained from him we believe.

The first statement is so well written and so conclusive that with the permission of the author it is presented in its entirety:

- 1st Kinds of dental service.
- 2nd Dental facilities
- 3rd Dental facilities and dental practice
- 4th Dental facilities, the relation to dental needs.
- 5th Dental service in various ways
- 6th Tonsil and adenoid work
- 7th Principles of a community dental program
- 8th Recommendations for Chicago

DENTISTRY A BRANCH OF MEDICINE—Only very gradually has a new conception spread. The dentist has been thought of as the mechanic of the mouth. An entirely different conception is necessary for any adequate understanding of the dental needs of a community and of the ways of meeting them. Dentistry as a recognized profession is about a century old; dentistry in its modern conception is hardly a generation old. Within this brief recent period the connections between dental trouble and disease have been so developed as to transform the conception of dentistry from a kind of mouth mechanics to a branch of medicine. This transformation in point of view has been brought about by the convergence of a number of forces. The discovery that a number of constitutional diseases may be caused by root abscesses has aroused among medical men an unprecedented interest in the care of the teeth. The development of X-ray technique has provided a tool whereby the condition of the teeth and the presence or absence of foci of infection may be determined with an accuracy formerly unthought of. The prompt and sometimes dramatic cures of rheumatism, of heart disease, and of other serious or painful afflictions, as a result of treatment of the teeth, have aroused active interest among the laity. The relation of bodily nutrition to the growth of decay of the teeth has been studied in recent years by students of dietetics and metabolism and by medical men, and has further emphasized in the minds of leading dentists and physicians the medical relations between mouth conditions and general physiology.

Again, from another angle, medical inspection in public schools, as it has become more widespread in recent years, has revealed a startling amount of dental defects. Still more recently the examinations made for the military draft stirred the country by their revelations of the great prevalence of many physical defects, particularly of the teeth.

Finally, actual demonstrations made by a few public spirited dentists and health workers, notably Dr. Alfred C. Fones of Bridgeport, of the benefits of dental prophylaxis among children, have convinced a certain proportion of the dental and medical professions and a certain section of the general public, that practical accomplishments are possible for a not unreasonable expense.

With the advance in the preventive idea in dentistry, more and more effort has been made to reach children of the younger ages. So far as adults are concerned, the public has become more receptive to the idea of preventive dentistry, because modern discoveries in local anaesthesia have made dentistry almost painless, and because infection at the roots of the teeth has been demonstrated as a cause of ill-health.

Fear of pain has been removed and at the same time a popular conviction has dawned that bad teeth may cause illness.

The dental and medical professions have been brought much closer together by the discovery of the relation between sepsis and systemic disease. The interest of the physician in dentistry has been greatly stimulated for this reason. On the other hand, the dentist's interest in medicine has been enhanced by his growing realization of the significance of malnutrition as a cause of dental disease.

The necessity for the community dental service is being very acutely realized in Chicago and must shortly be appreciated by every other progressive community in the United States. We have now passed the period of agitation and have stepped into the period of realization.

It will only be a comparatively few years until any first-class town without a dental infirmary for the benefit of the growing child will be considered negligent.

It is greatly to be hoped that other men with the broad vision of Mr. Rosenwald will be found in other cities and that this splendid start which has to a very large extent been inspired by the wonderful work of the Forsyth Infirmary in Boston will become an American habit and that the municipal dental institute will be just as regular an institution in our civic life as is the municipal hospital.

"Your Teeth" Film

ANOTHER excellent film, called "Your Teeth," after the series of syndicate stories that received so wide a distribution through this magazine, has recently been completed by the Atlas Educational Film Company of Chicago.

This film is the advance guard of a series of films upon oral hygiene.

Dr. Thomas B. Hartzell shows upon the silver screen his method of cleansing the teeth.

The film is well done and the subject matter excellent.

Democracy

No successful society is run solely for the benefit of those who seek office. Office holders are a necessary evil.

All our societies are based upon the democratic principle that when a private citizen has been elected to office he shall become a private citizen again after his term of office is over.

In a democracy there is no elevation to the peerage, no hang-over from the purple. When a man is elected president of an organization he should, during his term of office, be the real president. He deserves the loyal support of every member of the organization and equally he deserves protection from interference by those who have held office previously.

There is a growing custom of conferring lifetime privileges upon those who have passed through society presidencies, such as perpetual voting power in the house of delegates. This should not be done.

The organization of the United States government is a good enough model to go by.

Our ex-presidents find enough honor and glory in being ex-presidents without being eternal members of Congress.

Let us insist upon efficiency in office—loyal support of the membership and complete return to the ranks when term of office is over.

“How Come Dentists”



THIS editorial from the *LaCrosse, Wisconsin Tribune and Leader-Press* should be read with appreciation by every dentist. *LaCrosse* is to be congratulated upon having an editor who has the vision to comment upon some of the real things of life that are ordinarily overlooked and who is willing to see the good points in other people:

Consider the dentist: In an atmosphere of gloom and depression and suffering he remains cheerful, an object lesson in deportment to all and sundry. Dealing hour by hour with human misery, witnessing the reactions of humanity to pain as a regular medium of his daily existence, cognizant as is no other that cowardice is a great factor of the average human spirit, the dentist should be a cynic. One would naturally

expect his appraisal of humanity to be about fifty cents on the dollar and dear at the price. But who ever saw a misanthropic dentist?

On the contrary, only sunshine is on his face as he fits together his buzzing instrument of torture and prepares to prove for the thousandth time that a little pain will make a six-foot two-hundred-pounder wriggle like a fishworm on a hook. Only optimism is in his cheery comment on the weather as he takes his barbed brad-awl, or whatyoumaycallit, and explores the sensibilities of an exposed nerve. He keeps his temper when a husky citizen who has come begging for relief unreasonably kicks him in the stomach because it hurts a little. You look in vain upon his face for a smile of contempt when clients stall and duck appointments. You never heard one say, "I told you so" when despite repeated warnings a neglected cavity suddenly goes bolshevik and the negligent owner, quivering now with fear and now with acute misery, presents himself for the long-overdue operation. How is all of this? Is the dentist less or more than human? Or is there some selective process in dental education whereby all but the true-blooded humanitarians are eliminated? Probably none but members of the craft can say—but in our ignorant admiration we could wish that the philosophy of the profession had its literary exponent. This generation, suffering under the literary fashion of cynical disapproval of man and all his works, physical, mental and moral, would be the better for a new school of writing informed with the staunch and wholesome faith in folks which the dentists cling to so stubbornly. Modern authors jab us, and curse us when we squirm. It would be a relief to be jabbed by one who, after the custom of the dental surgeon, would considerably overlook our shortcomings.



Laffodontia

If you have a story that appeals to you as funny, send it in to the editor. He may print it—but he won't send it back!

LANDLADY (knocking at the bedroom door): "Eight o'clock! Eight o'clock!"

FROSH (seepily): "Did you? Better call a doctor."

JACK: "I think that a street car hash jus' passed."

CHAN: "How yuh know?"

JACK: "I can shee its tracks."

"Well, my boy, do you know what 'syntax' means?" asked the teacher.
"Yes, sir; the duty upon liquor."

THE NEW STENOGRAPHY: "What does the word 'assess' mean?"

THE OLD STENOGRAPHY: "Why, er—'assess' is a lady donkey."

TOURIST: (gazing at a volcano) "Looks like Hell, doesn't it?"

NATIVE: "How these Americans have traveled."

STU: "Have you seen 'Theophrastus'?"

PID: "Yes. Theophrastus show I ever saw."

"The duchess has a glass eye."

"How do you know?"

"I was talking with her the other evening and it came out in the course of the conversation."

It was the fag-end of a tedious evening. At the close of the third twenty-minute lapse he said plaintively:

"I wish I had money. I'd travel."

"Well," she replied, as she began to unroll her stocking, "how much do you need?"

MRS. WELLRED: "When you were in France I suppose you saw the great tracts of barren waste?"

MRS. GADABOUT: "Oh my, yes. He has a wonderful estate."

"Oh Cholly, I've taken up golf."

"Fine, what do you go around in?"

"Oh, knickerbockers."

CHAN (gazing at window of a young lady evidently ignorant of the conventional use of a shade): "Not a bit shy, is she?"

JACK: "Not shy, but certainly retiring!"

"Sorry, girls," apologized the sous to the occupants of the upper. "This is my berth and one of you has simply got to get out."

TEACHER: "Johnny, use the word 'Egypt' in a sentence."

JOHNNY: "I asked for my change but E gypt me."

PAUL: "Where do you spend your summer vacations?"

PAULINE: "In the mountains."

PAUL: "Do you have a guide?"

PAULINE: "Only my conscience."

TEMPERANCE LECTURER: "If I lead a donkey up to a pail of water and a pail of beer, which will he choose to drink?"

SOAK: "The water."

TEMPERANCE LECTURER: "Yes, and why?"

SOAK: "Because he's an ass."
